

09/853,854

=> d his

(FILE 'HOME' ENTERED AT 17:50:59 ON 20 OCT 2001)

FILE 'REGISTRY' ENTERED AT 17:51:06 ON 20 OCT 2001

E GEMIFLOXACIN/CN

L1 2 S E3-E4

FILE 'CAPLUS, USPATFULL' ENTERED AT 17:51:36 ON 20 OCT 2001

L2 126 S L1

L3 2 S L2 AND MYCOPLASM? AND BACTERIA? AND UREAPLASMA?

L4 2 DUP REM L3 (0 DUPLICATES REMOVED)

09/853,854

=> e gemifloxacin/cn

E1 1 GEMICHALCONE C/CN  
E2 1 GEMIDE/CN  
E3 1 --> GEMIFLOXACIN/CN  
E4 1 GEMIFLOXACIN MESYLATE/CN  
E5 1 GEMIN A/CN  
E6 1 GEMIN B/CN  
E7 1 GEMIN C/CN  
E8 1 GEMIN D/CN  
E9 2 GEMIN E/CN  
E10 1 GEMIN E (A FORM)/CN  
E11 1 GEMIN E (B FORM)/CN  
E12 1 GEMIN F/CN

=> s e3-e4

1 GEMIFLOXACIN/CN  
1 "GEMIFLOXACIN MESYLATE"/CN  
L1 2 (GEMIFLOXACIN/CN OR "GEMIFLOXACIN MESYLATE"/CN)

=> d 11 1 2

L1 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2001 ACS

RN 210353-53-0 REGISTRY

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-(methoxyimino)-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-, monomethanesulfonate (9CI) (CA INDEX NAME)

OTHER NAMES:

CN **Gemifloxacin mesylate**

CN LB 20304a

CN SB 265805S

FS STEREOSEARCH

DR 204519-65-3, 214346-13-1

MF C18 H20 F N5 O4 . C H4 O3 S

SR CA

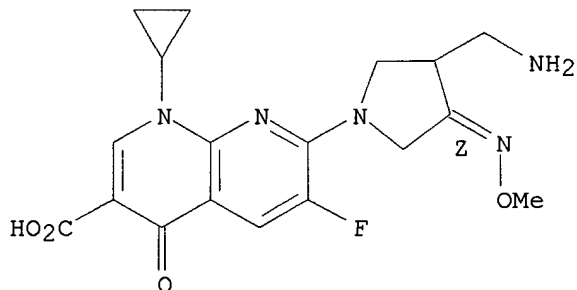
LC STN Files: BIOSIS, BIOTECHNO, CA, CAPLUS, DDFU, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IPA, SYNTHLINE, TOXLIT, USPATFULL

CM 1

CRN 175463-14-6

CMF C18 H20 F N5 O4

Double bond geometry as shown.



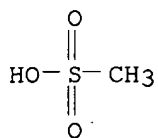
Delacroix

09/853,854

CM 2

CRN 75-75-2

CMF C H4 O3 S



49 REFERENCES IN FILE CA (1967 TO DATE)

49 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L1 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2001 ACS

RN 175463-14-6 REGISTRY

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-(methoxyimino)-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-(9CI) (CA INDEX NAME)

OTHER NAMES:

CN **Gemifloxacin**

CN LB 20304

CN SB 265805

FS STEREOSEARCH

DR 204519-64-2, 210353-52-9, 214346-11-9

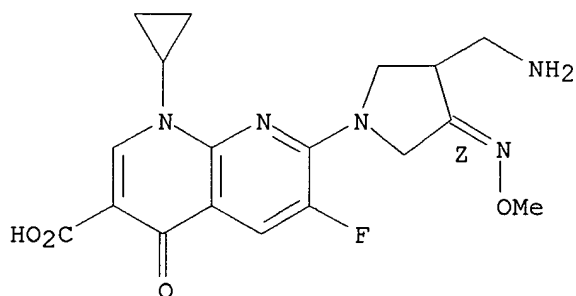
MF C18 H20 F N5 O4

CI COM

SR CA

LC STN Files: ADISINSIGHT, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CBNB, DDFU, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IPA, MEDLINE, PHAR, SYNTHLINE, TOXLIT, USPATFULL

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

75 REFERENCES IN FILE CA (1967 TO DATE)

4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

76 REFERENCES IN FILE CAPLUS (1967 TO DATE)

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09/853,854

=> file caplus, uspatfull

09/853,854

=> d his

(FILE 'HOME' ENTERED AT 17:50:59 ON 20 OCT 2001)

FILE 'REGISTRY' ENTERED AT 17:51:06 ON 20 OCT 2001  
E GEMIFLOXACIN/CN

L1 2 S E3-E4

FILE 'CAPLUS, USPATFULL' ENTERED AT 17:51:36 ON 20 OCT 2001

=> s l1

L2 126 L1

=> s l2 and mycoplasm? and bacteria? and ureaplasma?

L3 2 L2 AND MYCOPLASM? AND BACTERIA? AND UREAPLASMA?

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 2 DUP REM L3 (0 DUPLICATES REMOVED)

=> d l4 abs ibib kwic hitstr 1 2

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2001 ACS

AB This invention relates, in part, to newly identified methods of using  
quinolone antibiotics, particularly a gemifloxacin compd. against certain  
**bacteria**, esp. pathogenic **bacteria**.

ACCESSION NUMBER: 2001:167806 CAPLUS

DOCUMENT NUMBER: 134:188189

TITLE: Methods of use of fluoroquinolone compounds against  
**bacteria**

INVENTOR(S): Ambler, Jane E.; Amyes, Sebastian G.; Andrews,  
Jennifer Mary; Appelbaum, Peter C.; Barker, Phillippa  
J.; Beach, Mondel L.; Berry, Valerie Joan; Briand,  
Jacques; Broskey, John P.; et al.

PATENT ASSIGNEE(S): Smithkline Beechman Corporation, USA; Smithkline  
Beecham P.L.C.

SOURCE: PCT Int. Appl., 303 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001015695	A1	20010308	WO 2000-US23883	20000831
W:	AE, AL, AU, BA, BB, BG, BR, BZ, CA, CN, CZ, DZ, EE, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, MZ, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, TZ, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRIORITY APPLN. INFO.:			US 1999-151834	P 19990901
			US 1999-151835	P 19990901
			US 1999-151836	P 19990901

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US 1999-151837	P	19990901
US 1999-151917	P	19990901
US 1999-151960	P	19990901
US 1999-153884	P	19990914
US 1999-154115	P	19990914
US 1999-155148	P	19990922
US 1999-155149	P	19990922
US 1999-155150	P	19990922
US 1999-155338	P	19990922
US 1999-155340	P	19990922
US 1999-155344	P	19990922
US 1999-155346	P	19990922
US 1999-155347	P	19990922
US 1999-155348	P	19990922
US 1999-155349	P	19990922
US 1999-155358	P	19990922
US 1999-155359	P	19990922
US 1999-155360	P	19990922
US 1999-155379	P	19990922
US 1999-155380	P	19990922
US 1999-155381	P	19990922
US 1999-155382	P	19990922
US 1999-155383	P	19990922
US 1999-155384	P	19990922
US 1999-155391	P	19990922
US 1999-155392	P	19990922
US 1999-155393	P	19990922
US 1999-155394	P	19990922
US 1999-155395	P	19990922
US 1999-155868	P	19990924
US 1999-155869	P	19990924
US 1999-155957	P	19990924

- TI Methods of use of fluoroquinolone compounds against **bacteria**
- AB This invention relates, in part, to newly identified methods of using quinolone antibiotics, particularly a gemifloxacin compd. against certain **bacteria**, esp. pathogenic **bacteria**.
- IT Enzymes, biological studies  
 RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
 (DNA gyrases; quinolone antibiotics, esp. gemifloxacin compds., against **bacteria**)
- IT Biological transport  
 (drug, efflux; quinolone antibiotics, esp. gemifloxacin compds., against **bacteria**)
- IT Gene, microbial  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (gyrA; quinolone antibiotics, esp. gemifloxacin compds., against **bacteria**)
- IT Gene, microbial  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (gyrB; quinolone antibiotics, esp. gemifloxacin compds., against **bacteria**)
- IT Metabolism  
 (of pneumococcal pathogenic **bacteria**; quinolone antibiotics, esp. gemifloxacin compds., against **bacteria**)
- IT Gene, microbial  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (parC; quinolone antibiotics, esp. gemifloxacin compds., against

**bacteria)**  
IT Gene, microbial  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(parE; quinolone antibiotics, esp. gemifloxacin compds., against  
**bacteria)**  
IT Acinetobacter  
Acinetobacter anitratum  
Acinetobacter baumannii  
Acinetobacter calcoaceticus  
Acinetobacter lwoffii  
Actinomyces israelii  
Actinomyces odontolyticus  
Anaerobiospirillum succiniciproducens  
Anaerobiospirillum thomasii  
Antibacterial agents  
Bacillus (bacterium genus)  
Bacteroides  
Bacteroides fragilis  
Bacteroides tectum  
Bacteroides ureolyticus  
Bilophila wadsworthia  
Bordetella bronchiseptica  
Bordetella parapertussis  
Bordetella pertussis  
Burkholderia cepacia  
Campylobacter gracilis  
Chlamydia pneumoniae  
Citrobacter freundii  
Clostridium clostridioforme  
Clostridium difficile  
Clostridium innocuum  
Clostridium perfringens  
Clostridium ramosum  
Corynebacterium  
Drug resistance  
Enterobacter  
Enterobacter aerogenes  
Enterobacter cloacae  
Enterobacteriaceae  
Enterococcus  
Enterococcus faecalis  
Enterococcus faecium  
Escherichia coli  
Finegoldia magna  
Fluoribacter bozemanii  
Fluoribacter dumoffii  
Fluoribacter gormanii  
Fusobacterium gonidiaformans  
Fusobacterium mortiferum  
Fusobacterium naviforme  
Fusobacterium necrogenes  
Fusobacterium necrophorum  
Fusobacterium nucleatum  
Fusobacterium nucleatum animalis  
Fusobacterium russii  
Fusobacterium ulcerans  
Fusobacterium varium

Gram-negative **bacteria**  
 Granulicatella adiacens  
 Haemophilus  
 Haemophilus influenzae  
 Haemophilus parainfluenzae  
 Klebsiella  
 Klebsiella oxytoca  
 Klebsiella pneumoniae  
 Legionella feeleeii  
 Legionella jordanis  
 Legionella longbeachae  
 Legionella oakridgensis  
 Legionella pneumophila  
 Legionella sainthelensi  
 Legionella wadsworthii  
 Moraxella catarrhalis  
 Morganella morganii  
   **Mycoplasma** fermentans  
   **Mycoplasma** genitalium  
   **Mycoplasma** hominis  
   **Mycoplasma** penetrans  
   **Mycoplasma** pneumoniae  
 Neisseria gonorrhoeae  
 Neisseria meningitidis  
 Pathogenic **bacteria**  
 Peptostreptococcus  
 Peptostreptococcus anaerobius  
 Peptostreptococcus asaccharolyticus  
 Peptostreptococcus micros  
 Peptostreptococcus prevotii  
 Porphyromonas asaccharolytica  
 Porphyromonas cangingivalis  
 Porphyromonas canoris  
 Porphyromonas cansulci  
 Porphyromonas circumdentaria  
 Porphyromonas gingivalis  
 Porphyromonas levii  
 Porphyromonas macacae  
 Prevotella bivia  
 Prevotella buccae  
 Prevotella heparinolytica  
 Prevotella intermedia  
 Prevotella loescheii  
 Prevotella melaninogenica  
 Prevotella oris  
 Proteus (bacterium)  
 Proteus mirabilis  
 Proteus vulgaris  
 Providencia  
 Providencia stuartii  
 Pseudomonadaceae  
 Pseudomonas aeruginosa  
 Ralstonia pickettii  
 Salmonella  
 Serratia  
 Staphylococcus  
 Staphylococcus aureus



Staphylococcus epidermidis  
 Staphylococcus saprophyticus  
 Stenotrophomonas maltophilia  
 Streptococcus  
 Streptococcus agalactiae  
 Streptococcus anginosus  
 Streptococcus bovis  
 Streptococcus milleri  
 Streptococcus mutans  
 Streptococcus pneumoniae  
 Streptococcus pyogenes  
 Tatlockia micdadei

**Ureaplasma** urealyticum

Veillonella

(quinolone antibiotics, esp. gemifloxacin compds., against  
**bacteria**)

IT Antibiotics

(quinolone; quinolone antibiotics, esp. gemifloxacin compds., against  
**bacteria**)

IT Streptococcus

(.beta.-hemolytic; quinolone antibiotics, esp. gemifloxacin compds.,  
 against **bacteria**)

IT 85721-33-1, Ciprofloxacin

RL: BAC (Biological activity or effector, except adverse); BPR (Biological  
 process); BSU (Biological study, unclassified); THU (Therapeutic use);  
 BIOL (Biological study); PROC (Process); USES (Uses)  
 (and resistance; quinolone antibiotics, esp. gemifloxacin compds.,  
 against **bacteria**)

IT 1404-90-6, Vancomycin 55268-75-2, Cefuroxime 63527-52-6, Cefotaxime  
 83905-01-5, Azithromycin 100490-36-6, Tosufloxacin 100986-85-4,  
 Levofloxacin 119914-60-2, Grepafloxacin 147059-72-1, Trovafloxacin  
**175463-14-6**, Gemifloxacin **210353-53-0**, Gemifloxacin  
 mesylate

RL: BAC (Biological activity or effector, except adverse); BPR (Biological  
 process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);  
 USES (Uses)

(quinolone antibiotics, esp. gemifloxacin compds., against  
**bacteria**)

IT 60-54-8, Tetracycline 61-33-6, Penicillin G, biological studies  
 69-53-4, Ampicillin 114-07-8, Erythromycin 389-08-2, Nalidixic acid  
 443-48-1, Metronidazole 564-25-0, Doxycycline 723-46-6,  
 Sulfamethoxazole 1403-66-3, Gentamicin 8064-90-2, Co-trimoxazole  
 13292-46-1, Rifampicin 18323-44-9, Clindamycin 26787-78-0, Amoxicillin  
 64221-86-9, Imipenem 79198-29-1 79350-37-1, Cefixime 81103-11-9,  
 Clarithromycin 82419-36-1, Ofloxacin 105956-97-6, Clinafloxacin  
 110871-86-8, Sparfloxacin 112811-59-3, Gatifloxacin 127254-12-0,  
 Sitafloxacin 151096-09-2, Moxifloxacin **175463-14-6D**,  
 Gemifloxacin, derivs.

RL: BAC (Biological activity or effector, except adverse); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)

(quinolone antibiotics, esp. gemifloxacin compds., against  
**bacteria**)

IT 144941-31-1, Topoisomerase IV

RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
 (quinolone antibiotics, esp. gemifloxacin compds., against  
**bacteria**)

IT 1406-05-9, Penicillin

09/853,854

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(resistance to; quinolone antibiotics, esp. gemifloxacin compds.,  
against **bacteria**)

IT **175463-14-6**, Gemifloxacin **210353-53-0**, Gemifloxacin  
mesylate

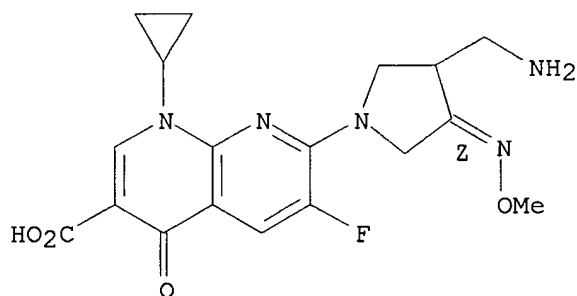
RL: BAC (Biological activity or effector, except adverse); BPR (Biological  
process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);  
USES (Uses)

(quinolone antibiotics, esp. gemifloxacin compds., against  
**bacteria**)

RN 175463-14-6 CAPLUS

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-  
(methoxyimino)-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-  
(9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 210353-53-0 CAPLUS

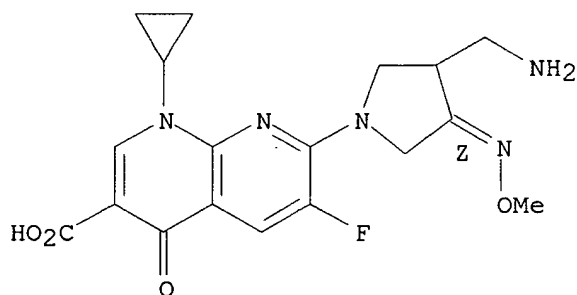
CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-  
(methoxyimino)-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-,  
monomethanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 175463-14-6

CMF C18 H20 F N5 O4

Double bond geometry as shown.



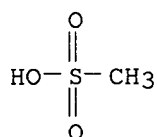
CM 2

CRN 75-75-2

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09/853,854

CMF C H4 O3 S



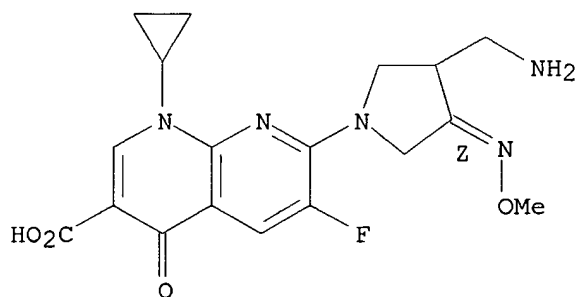
IT **175463-14-6D**, Gemifloxacin, derivs.

RL: BAC (Biological activity or effector, except adverse); THU  
(Therapeutic use); BIOL (Biological study); USES (Uses)  
(quinolone antibiotics, esp. gemifloxacin compds., against  
**bacteria**)

RN 175463-14-6 CAPLUS

CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-  
(methoxyimino)-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-  
(9CI) (CA INDEX NAME)

Double bond geometry as shown.



REFERENCE COUNT:

3

REFERENCE(S):

- (1) Hardy, D; J Antimicrob Chemother 1999, V44(Suppl A), P146
- (2) Heaton, V; J Antimicrob Chemother 1999, V44(Suppl A), P140
- (3) King, A; J Antimicrob Chemother 1999, V44(Suppl A), P147

L4 ANSWER 2 OF 2 USPATFULL

AB This invention relates, in part, to newly identified methods of using  
quinolone antibiotics, particularly a gemifloxacin compound against  
certain pathogenic **bacteria**.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:112336 USPATFULL

TITLE: Methods of use of antimicrobial compounds against  
pathogenic mycoplasma **bacteria**

INVENTOR(S): Crabb, Donna M., Birmingham, AL, United States  
Duffy, Lynn B., Birmingham, AL, United States  
Searcy, Karen B., Birmingham, AL, United States

PATENT ASSIGNEE(S): SmithKline Beecham Corporation, Philadelphia, PA,  
United States (U.S. corporation)

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	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6262071	B1	20010717
APPLICATION INFO.:	US 1999-399855		19990921 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-141455	19990629 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Weddington, Kevin E.	
LEGAL REPRESENTATIVE:	Gimmi, Edward R., Henderson, Loretta J., Kinzig, Charles M.	
NUMBER OF CLAIMS:	13	
EXEMPLARY CLAIM:	1	
LINE COUNT:	254	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

TI Methods of use of antimicrobial compounds against pathogenic *mycoplasma* **bacteria**

AB This invention relates, in part, to newly identified methods of using quinolone antibiotics, particularly a gemifloxacin compound against certain pathogenic **bacteria**.

SUMM This invention relates, in part, to newly identified methods of using quinolone antibiotics, particularly a gemifloxacin compound against **Mycoplasma bacteria**, such as *Mycoplasma pneumoniae*.

SUMM Quinolones have been shown to be effective to varying degrees against a range of **bacterial** pathogens. However, as diseases caused by these pathogens are on the rise, there exists a need for antimicrobial compounds that. . .

SUMM Provided herein is a significant discovery made using a gemifloxacin compound against **Mycoplasma**, demonstrating the activity of the gemifloxacin compound used was superior to a number of quinolones as described in more detail herein. Gemifloxacin compounds are valuable compounds for the treatment of **bacterial** infection caused by a range of **Mycoplasma** pathogens, including those resistant to usual oral therapy, thereby filling an unmet medical need.

SUMM An object of the invention is a method for modulating metabolism of pathogenic **Mycoplasma bacteria** comprising the step of contacting pathogenic **Mycoplasma bacteria** with an antibacterially effective amount of a composition comprising a quinolone, particularly a gemifloxacin compound, or an antibacterially effective derivative. . .

SUMM A further object of the invention is a method wherein said pathogenic **Mycoplasma bacteria** is selected from the group consisting of: **Mycoplasma pneumoniae**, *M. hominis*, *M. fermentans*, *M. genitalium*, *M. penetrans* and **Ureaplasma urealyticum**.

SUMM Also provided by the invention is a method of treating or preventing a **bacterial** infection by pathogenic **Mycoplasma bacteria** comprising the step of administering an antibacterially effective amount of a composition comprising a quinolone, particularly a gemifloxacin compound to a mammal suspected of having or being at risk of having an infection with pathogenic **Mycoplasma bacteria**.

SUMM A preferred method is provided wherein said modulating metabolism is inhibiting growth of said **bacteria** or killing said **bacteria**.

- SUMM A further preferred method is provided wherein said contacting said **bacteria** comprises the further step of introducing said composition into a mammal, particularly a human.
- SUMM Further preferred methods are provided by the invention wherein said **bacteria** is selected from the group consisting of: **Mycoplasma pneumoniae**, *M. hominis*, *M. fermentans*, *M. genitalium*, *M. penetrans* and **Ureaplasma urealyticum**.
- DETD . . . among other things, methods for using a composition comprising a quinolone, particularly a gemifloxacin compound against a range of pathogenic **bacteria**.
- DETD . . . of a gemifloxacin compound, as well as other new quinolones and macrolides using low-passaged clinical isolates and type strains of **Mycoplasma** species commonly found in the respiratory and urogenital tract of humans. Organisms used in the analyses included **Mycoplasma pneumoniae** (MPN), *M. hominis* (Mh), *M. fermentans* (Mf), *M. genitalium* (Mg), *M. penetrans* (Mp) and **Ureaplasma urealyticum** (Uu). Minimum Inhibitory Concentrations (MICs) were determined using a micro-broth dilution method. Assays for **Ureaplasma urealyticum** were performed in 10B media and all other **mycoplasma** assays were carried out in SP4 medium. Comparator drugs, to which gemifloxacin was compared, as well as also being useful.
- DETD The invention provides a method for modulating metabolism of pathogenic **Mycoplasma bacteria**. Skilled artisans can readily choose pathogenic **Mycoplasma bacteria** or patients infected with or suspected to be infected with these organisms to practice the methods of the invention. Alternatively, the **bacteria** useful in the methods of the invention may be those described herein.
- DETD . . . provision of a composition comprising a gemifloxacin compound to a human patient in need of such composition or directly to **bacteria** in culture medium or buffer.
- DETD For example, when contacting a human patient or contacting said **bacteria** in a human patient or in vitro, the compositions comprising a quinolone, particularly a gemifloxacin compound, preferably pharmaceutical compositions may. . .
- DETD . . . and compositions of the methods of the invention may be employed alone or in conjunction with other compounds, such as **bacterial** efflux pump inhibitor compounds or antibiotic compounds, particularly non-quinolone compounds, e.g., beta-lactam antibiotic compounds.
- DETD . . . are within the scope of this invention. It is preferred that the dosage is selected to modulate metabolism of the **bacteria** in such a way as to inhibit or stop growth of said **bacteria** or by killing said **bacteria**. The skilled artisan may identify this amount as provided herein as well as using other methods known in the art, . . .
- DETD . . . a gemifloxacin compound or composition of the invention may be administered by injection to achieve a systemic effect against relevant **bacteria**, preferably a pathogenic **Mycoplasma bacteria**, shortly before insertion of an in-dwelling device. Treatment may be continued after surgery during the in-body time of the device. In addition, the composition could also be used to broaden perioperative cover for any surgical technique to prevent **bacterial** wound infections caused by or related to pathogenic **Mycoplasma bacteria**.
- DETD . . . used in the methods of this invention may be used generally as a wound treatment agent to prevent adhesion of **bacteria** to

matrix proteins, particularly pathogenic **Mycoplasma bacteria**, exposed in wound tissue and for prophylactic use in dental treatment as an alternative to, or in conjunction with, antibiotic. . . .

DETD Also provided by the invention is a method of treating or preventing a **bacterial** infection by pathogenic **Mycoplasma bacteria** comprising the step of administering an antibacterially effective amount of a composition comprising a quinolone, particularly a gemifloxacin compound to a mammal, preferably a human, suspected of having or being at risk of having an infection with pathogenic **Mycoplasma bacteria**.

DETD While a preferred object of the invention provides a method wherein said pathogenic **Mycoplasma bacteria** is selected from the group consisting of: **Mycoplasma pneumoniae**, **M. hominis**, **M. fermentans**, **M. genitalium**, **M. penetrans** and **Ureaplasma urealyticum**. Other pathogenic **Mycoplasma bacteria** may also be included in the methods. The skilled artisan may identify these organisms as provided herein as well as. . . .

CLM What is claimed is:

1. A method for modulating metabolism of pathogenic **Mycoplasma bacteria** comprising the step of contacting pathogenic **Mycoplasma bacteria** with an antibacterially effective amount of a composition comprising a gemifloxacin compound, or antibacterially effective derivatives thereof.

2. The method of claim 1 wherein said pathogenic **Mycoplasma bacteria** is a member of the genus **Mycoplasma**.

3. The method of claim 1 wherein said modulating metabolism is inhibiting growth of said **bacteria**.

4. The method of claim 1 wherein said modulating metabolism is killing said **bacteria**.

5. The method of claim 1 wherein said contacting said **bacteria** comprises the further step of introducing said composition into a mammal.

7. The method of claim 2 wherein said **bacteria** is selected from the group consisting of: **Mycoplasma hominis** and **Mycoplasma fermentans**.

8. The method of claim 1 wherein said **bacteria** is a member of the genus **Ureaplasma**.

9. The method of claim 8 wherein said **bacteria** is **Ureaplasma urealyticum**.

10. The method of claim 2 wherein said **bacteria** is selected from the group consisting of: **Mycoplasma pneumoniae**, **Mycoplasma genitalium**, and **Mycoplasma penetrans**.

IT 175463-14-6D, Gemifloxacin, derivs.

(methods of use of gemifloxacin and other fluoroquinolones against bacteria)

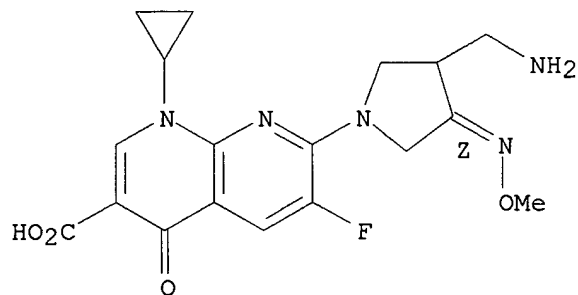
IT 175463-14-6D, Gemifloxacin, derivs.

(methods of use of gemifloxacin and other fluoroquinolones against

09/853,854

bacteria)  
RN 175463-14-6 USPATFULL  
CN 1,8-Naphthyridine-3-carboxylic acid, 7-[(4Z)-3-(aminomethyl)-4-(methoxyimino)-1-pyrrolidinyl]-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-(9CI) (CA INDEX NAME)

Double bond geometry as shown.



=> d his

(FILE 'HOME' ENTERED AT 17:50:59 ON 20 OCT 2001)

FILE 'REGISTRY' ENTERED AT 17:51:06 ON 20 OCT 2001  
E GEMIFLOXACIN/CN

L1 2 S E3-E4

FILE 'CAPLUS, USPATFULL' ENTERED AT 17:51:36 ON 20 OCT 2001

L2 126 S L1

L3 2 S L2 AND MYCOPLASM? AND BACTERIA? AND UREAPLASMA?

L4 2 DUP REM L3 (0 DUPLICATES REMOVED)

=> file stnguide

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	IS&R	L1	1	("6262071").PN.	USPAT	2001/10/20 17:48			0
2	BRS	L2	1	gemifloxacin\$	USPAT	2001/10/20 17:49			0